CLAIMS

1. An error correction method for performing error correction on data which are interleaved and are composed of plural code lines, said method comprising:

a step of giving parameters for tracking down errors in the respective code lines;

a rearrangement step of rearranging the code lines in the order in which error correction is to be carried out;

a judgement step of, with a code line to be subjected to error correction being a target code line, comparing the parameter of the target code line that is given in the step of giving the parameters, with the parameter which is used when performing error correction on a code line that is previous to the target code line in the error correction order, and judging, according to the result of the comparison, as to which parameter is to be used for tracking down an error in the target block, the parameter in the target code line or the parameter which is used when performing error correction on the code line that is previous to the target code line in the error correction order; and

an error correction step of performing error correction on the data for every code line, using the parameter.

2. An error correction method as defined in Claim 1 wherein the

parameter for tracking down an error in the target code line is determined before performing error correction on the target code line.

3. An error correction method as defined in Claim 1 wherein, in said rearrangement step, the order of the code lines of the data are rearranged at intervals of at least two lines.

4. An error correction method as defined in Claim 1 further including a first error correction incapability judgement step of judging whether or not the target code line is incapable of being subjected to error correction, on the basis of the parameter;

wherein error correction is carried out without using the parameter when the result of the judgement in the first error correction incapability judgement step indicates "incapable of error correction".

5. An error correction method as defined in Claim 4 further including a second error correction incapability judgement step of judging whether or not a code line that is previous to the target code line in the error correction order was incapable of being subjected to error correction;

wherein the target code line is subjected to error correction using the parameter of the target code line when the result of the judgement in the second error correction incapability

judgement step indicates "incapable of error correction".

6. An error correction method as defined in Claim 1 wherein said data are stored in an optical medium.

7. An error correction apparatus for performing error correction on data which are interleaved and are composed of plural code lines, said apparatus comprising:

a first memory circuit for storing data to be subjected to error correction;

a first control circuit for performing control so as to rearrange data being transferred from the first memory circuit to the error correction circuit, in the order in which the data are to be subjected to error correction;

an error correction circuit for performing error correction on the data stored in the first memory circuit, for each code line, using parameters for tracking down errors in the code lines;

a storage unit for storing parameters that have been used for error correction by the error correction circuit;

a comparator for comparing the parameter of the target code line with the parameter which has been used when performing error correction on a code line that is previous to the target code line in the error correction order and is stored in the storage unit;

wherein said control circuit rearranges the order of the code lines to be subjected to error correction, at intervals of at least two lines; and

said error correction circuit performs error correction on the target code line, according to the result of the comparison by the comparator, using, as the parameter for tracking down an error in the target code line, the parameter of the target code line or the parameter which has been used when performing error correction on a code line that is previous to the target code line in the error correction order.

8. An error correction apparatus as defined in Claim 7 further including:

a second memory circuit for storing the parameters; and

a second control circuit for performing control so as to read the parameters from the second memory circuit, and transferring the parameters.

9. An error correction apparatus as defined in Claim 7 wherein said storage unit is provided with a group of registers.

10. An error correction apparatus as defined in Claim 9 wherein said group of registers hold the parameters which are obtained from the second memory circuit through the second control circuit.

11. An error correction apparatus as defined in Claim 10 wherein said group of registers includes:

a first register for holding the number of parameters obtained from the second memory circuit; and

a second register for holding the parameters obtained from the second memory circuit.

12. An error correction apparatus as defined in Claim 11 wherein said second register is a shift register.

13. An error correction apparatus as defined in Claim 8 wherein said second control circuit generates addresses to be used when reading the parameters from the second memory circuit on the basis of the information stored in the group of registers.

14. An error correction apparatus as defined in Claim 8 wherein said data comparator compares the parameters stored in the second memory circuit with the parameters stored in the second register.

15. An error correction apparatus as defined in Claim 7 wherein

said first control circuit performs control such that at least two code lines of data to be subjected to error correction are simultaneously transferred from the first memory circuit to the error correction circuit; and

said error correction circuit has a means capable of

receiving at least two code lines of data simultaneously.

16. An error correction apparatus as defined in Claim 7 wherein said data are stored in an optical medium.